Translation

PCT/EP2003/002984

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P 62760	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/EP2003/002984	International filing date (*day/month/year*) 21 March 2003 (21.03.2003)	Priority date (*day/month/year*) 27 March 2002 (27.03.2002)
International Patent Classification (IPC) or national classification and IPC A61K 9/14, 9/51, B01D 9/00		
Applicant PHARMATECH GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 24 October 2003 (24.10.2003)	Date of completion of this report 21 June 2004 (21.06.2004)
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/EP2003/002984

I. Basis of the report

1. With regard to the **elements** of the international application:*

☒ the international application as originally filed

☒ the description:

pages 1-27, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☒ the claims:

pages 1-23, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____

☒ the drawings:

pages 1/16-16/16, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

☐ the sequence listing part of the description:

pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.*

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	10	YES
	Claims	1-9, 11-23	NO
Inventive step (IS)	Claims		YES
	Claims	1-23	NO
Industrial applicability (IA)	Claims	1-23	YES
	Claims		NO

2. Citations and explanations

This report makes reference to the following documents:

D1: Ruch F and Matijevic E (2000), J. Colloid Interface Sci 229: 207-211

D2: Gassman P et al. (1994), Eur. J. Pharm. Biopharm. 40: 64-72

D3: Steckel H et al. (1997), Int. J. Pharm. 152: 99-110

I - Novelty

The present application does not meet the requirements of PCT Article 33(2) because the subject matter of claims 1-9 and 11-23 is not novel.

1. Document D1 (abstract; paragraphs 2.2, 2.2.1, 3.1 and 4; figure 1) discloses methods for producing budesonide particles. During the precipitation process, a solution of budesonide in ethanol is mixed with water or an aqueous stabiliser solution (e.g. hydroxypropylcellulose), causing crystalline microparticles to precipitate. The stabiliser, such as HPC, is regarded as a "crystal growth inhibitor" (see the application: page 15, line 35 - page 17, line 16). The subject matter of claims 1-9 and 11-23 is therefore not novel in view of D1.

2. Document D2 (abstract; paragraphs 2.1-2.3, 3.1, 3.2; tables 1, 3 and 4) describes a method for producing hydrosols. A solution of a medicament in ethanol or acetone and an aqueous solution with a stabiliser (e.g. gelatine, poloxamers) and lactose are mixed in a static mixer, then dried, for example by spray-drying. The resultant particles are amorphous, yet the subject matter of claim 1 is not limited to a method for producing crystalline particles. The stabilisers and lactose are regarded as "crystal growth inhibitors" (see the application: page 15, line 35 - page 17, line 16). Claims 1-8 and 11-23 are thus not novel over D2.

3. Document D3 discloses a method whereby steroid particles are produced by precipitation from supercritical gases (abstract; paragraphs 2.1 and 3). The particles are obviously amorphous or polymorphous (figures 7 and 9). The phospholipid added to the steroid solution is regarded as a "crystal growth inhibitor" (see the application: page 15, line 35 - page 17, line 16). Claims 1-6, 8 and 11-23 are therefore not novel over D3.

4. The subject matter of claim 10 appears to be novel (PCT Article 33(2)).

II - Inventive step

1.For lack of novelty, the subject matter of claims 1-9 and 11-23 cannot be recognised as involving an inventive step (PCT Article 33(3)).

2. The subject matter of dependent claim 10 differs from D1 only in that hydroxypropylmethylcellulose is used instead of hydroxypropylcellulose, although the application does not indicate any unexpected effects or

properties of this choice of another cellulose. The subject matter of claim 10 therefore does not involve an inventive step.

III - Industrial applicability

The subject matter of claims 1-23 meets the requirements of PCT Article 33(4).